What is claimed is:

1   1. A method for doing call classification on a call to a

2   destination endpoint, comprising the steps of:

3   receiving audio information from the destination

4   endpoint;

5   analyzing received audio information for words using

6   automatic speech recognition; and

7   determining the call classification from the analyzed

8   words.

1   2. The method of claim 1 wherein the analyzed words

2   are formed as phrases.

1   3. The method of claim 1 wherein the step of

2   analyzing comprises performing front-end feature extraction on

3   the received audio information to produce a full feature vector.

1   4. The method of claim 3 wherein the step of

2   analyzing further comprises computing log likelihood probability

3   from the full feature vector.

1   5. The method of claim 4 wherein the step of

2   analyzing further comprises updating a dynamic programming

3   network used in the step of analyzing in response to the

4   computed log likelihood probability.

1   6. The method of claim 5 wherein the step of updating

2 comprises the step of executing an Viterbi process.

1   7. The method of claim 5 further comprises the step

2 of pruning the nodes in the dynamic programming network used

3 in the step of analyzing.

1   8. The method of claim 7 further comprises the step

2 of expanding a grammar network used in the step of analyzing.

1   9. The method of claim 8 further comprises the step

2 of performing grammar backtracking in response to the

3 expanded grammar network.

1   10. The method of claim 9 wherein the step of

2 backtracking comprises the step of executing another Viterbi

3 process.

1   11. The method of claim 1 wherein the step of

2 determining comprises executing an inference engine in

3 response to analyzed words.

1   12. The method of claim 11 further comprises the

2 step of analyzing the audio information to detect tones; and

3   the step of determining further responsive to the

4 detection of tones for determining the call classification.

1   13. The method of claim 12 further comprises the

2 step of analyzing the audio information to identify energy in the

3 audio information; and

4   the step of determining further responsive to the

5 identification of energy for determining the call classification.

1   14. The method of claim 13 further comprises the

2 step of analyzing the audio information to identify zero

3 crossings in the audio information; and

4   the step of determining further responsive to the

5 identification of zero crossings for determining the call

6 classification.

1   15. A method for doing call classification on a call to a

2 destination endpoint, comprising the steps of:

3   receiving audio information from the destination

4 endpoint;

5   analyzing received audio information for a first

6 classification;

7   analyzing received audio information using automatic

8 speech recognition for a second classification; and

9   determining the call classification from the first

10 classification and the second classification.

1   16. The method of claim 15 wherein the first

2 classification is one of tone detection, energy analysis, or zero

3 crossing analysis.

1   17. The method of claim 16 further comprises the

2 step of analyzing for a third classification; and

3   the step of determining further responsive to the third

4 classification.

1   18. The method of claim 17 wherein the third

2 classification is one of tone detection, energy analysis, or zero

3 crossing analysis.

1   19. The method of claim 18 wherein the step of

2 determining comprises executing an inference engine.

1   20. The method of claim 19 wherein the step of

2 analyzing received audio information using automatic speech

3 recognition comprises the step of executing a Hidden Markov

4 Model.

1   21. An apparatus for classifying a call to a called

2 destination endpoint, comprising:

3   a receiver for receiving audio information from the

4 called destination endpoint;

5   automatic speech recognizer for determining words in

6 the received audio information; and

7   an inference engine for classifying the call destination

8 endpoint in response to the determined words.

1   22. The apparatus of claim 21 wherein the

2   determined words are formed as phrases.

1   23. The apparatus of claim 21 further comprises an

2   analyzer for determining another classification from the

3   received audio information.

1   24. The apparatus of claim 23 wherein the analyzer is

2   one of a tone detector, energy detector, or a zero crossings

3   detector.

1   25. The apparatus of claim 24 wherein the automatic

2   speech recognizer is executing a Hidden Markov Model.